From: Mia, Marcia

Sent: Wednesday, November 21, 2018 03:13 PM

To: Marsh, Karen

Subject: RE: Quad Oa Question

Ex. 5 Deliberative Process (DP)

Marcia B Mia

Air Branch

Office of Compliance

2227A WJCS

U.S. Environmental Protection Agency

202-564-7042

From: Marsh, Karen

Sent: Wednesday, November 21, 2018 10:08 AM

To: Mia, Marcia <Mia.Marcia@epa.gov>

Subject: RE: Quad Oa Question

Thanks Marcia. I hadn't thought of it that way. I agree, the RTC isn't that helpful.

I'm going to first ask some of the questions you have raised here before we provide a response. I guess it sounds like you are leaning towards this not being a modification if they are not extending the wellbore through the perforation, correct?

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Karen R. Marsh, PE

US EPA, OAQPS, Sectors Policies and Programs Division

Fuels and Incineration Group

109 TW Alexander Drive, Mail Code E143-05

Research Triangle Park, NC 27711

Direct: (919) 541-1065; email: marsh.karen@epa.gov

From: Mia, Marcia

Sent: Tuesday, November 13, 2018 1:23 PM

To: Marsh, Karen <Marsh.Karen@epa.gov>

Subject: RE: Quad Oa Question

Ex. 5 Deliberative Process (DP)

Comment: …Like workovers with hydraulic fracturing, well workovers with acidizing and with re-perforating are treatments used to return a low-functioning well to productivity. Well acidizing, a form of fracturing using acid, typically involves pumping acid into the wellbore to remove formation damage, improving permeability and flow-the acid dissolves sediments that inhibit permeability to increase the effective well radius. Re-perforating, including adding shallower or deeper perforations in a well's cement liner or casing, is the process of clearing the wellbore and perforation holes that have been clogged by sediment.

Both types of workovers clearly cause a physical change to the wellbore and casing, and therefore a physical change to the wellhead, within section 111(a)(4)'s definition of 'modification.' These activities also result in increased fugitive emissions throughout the affected facility from production rate increases…

Response: We appreciate the input provided by the commenter and have made some changes to the modification definitions. We believe that the changes achieve our original goal of having clearly identifiable criteria that can be easily recognized by operators and regulators.

Marcia B Mia

Air Branch

Office of Compliance

2227A WJCS

U.S. Environmental Protection Agency

202-564-7042

From: Marsh, Karen

Sent: Tuesday, November 13, 2018 11:23 AM

To: Mia, Marcia <Mia.Marcia@epa.gov>

Subject: FW: Quad Oa Question

Marcia,

Ex. 5 Deliberative Process (DP)

60.5365a(i)(3) states that for purposes of 60.5397a, a "modification" to a well site occurs when a new well is drilled at an existing well site. In this case, a well (a hole drilled for the purpose of producing natural gas) is being drilled at a well site (one or more surface sites that are constructed for the drilling and subsequent operation of any natural gas well).

Just wanted your thoughts before I respond similarly.

Thanks!

Karen

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Karen R. Marsh, PE

US EPA, OAQPS, Sectors Policies and Programs Division

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Direct: (919) 541-1065; email: marsh.karen@epa.gov

From: Shamim Reza <sreza@bry.com>

Sent: Wednesday, November 07, 2018 3:09 PM

To: Marsh, Karen <Marsh.Karen@epa.gov>

Subject: Quad Oa Question

Hello Karen,

I have a question and wanted to check with you my thought. Please advise. Thank you

Question

Does re-perforating (including new perforations in an existing wellbore) an "existing well" (i.e. grandfathered well site) constitute a "modification" thereby triggering NSPS OOOOa (or Rule) LDAR applicability under 40 CFR §60.5365a(i) et al?

My thought

No. Based on EPA guidance, re-perforating an existing well, by itself[1], should not trigger the NSPS OOOOa LDAR requirements since it does not satisfy the criteria in §60.5365a(i)(3).

During the rulemaking process, EPA (or Agency) indicated that §60.5365a(i)(3) reflects the Agency's intent of what activities performed on an "existing facility" (as defined in §60.2) constitute a "modification" for well site LDAR applicability.

Therefore, activities not listed in §60.5365a(i)(3), do not constitute a "modification" and would not trigger applicability of the NSPS OOOOa LDAR requirements for well sites.

The activities listed in §60.5365a(i)(3) which constitute a "modification" are:

A new well is drilled at an existing well site

A well at an existing well site is hydraulically fractured, or

A well at an existing well site is hydraulically re-fractured

Re-perforation is not listed in §60.5365a(i)(3).

Re-perforation does not meet the definitions of "hydraulic fracturing" or "hydraulic refracturing" in §60.5430a since no "pressurized fluids" are sent downhole "to penetrate tight formations".

Although "drilling" a new well is not defined in the Rule, a plain language understanding of that phrase would involve creating a new wellbore hole or some type of

sidetrack using equipment designed to drill into the subsurface. Re-perforation does not involve creating a new wellbore or sidetrack.

Since the activity is not listed in §60.5365a(i)(3) and does not constitute drilling a new well, hydraulically fracturing, or hydraulically refracturing a well, re-perforation, alone, of an existing well at an "existing facility" does not constitute a "modification" and therefore does not trigger NSPS OOOOa LDAR applicability.

During the final rulemaking for NSPS OOOOa, commenters explicitly requested that EPA expand the "modification" criteria in §60.5365a(i)(3) to include re-perforation (including perforating a new zone in the existing wellbore) and acidizing well workover activities. The Agency declined to make the changes and instead indicated that EPA wanted to define modifications to be "clearly identifiable criteria that can be easily recognized by operators and regulators".

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Be Safe...For What Matters Most!

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[1] If perforation/re-perforation is done in conjunction with drilling a new well or a hydraulic fracturing/refracturing job then it would trigger NSPS OOOOa well site LDAR applicability.